



CALFED
BAY-DELTA
PROGRAM

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Date: October 23, 1997
To: BDAC Members
From: Lester A. Snow, Executive Director
CALFED Bay-Delta Program
Subject: Facilitated Scientific Review of the ERPP

Summary

A Scientific Review Panel was convened on October 6-9, 1997 to provide an independent scientific evaluation of the CALFED Ecosystem Restoration Program Plan (ERPP). The Panel was comprised of eight nationally recognized experts in various disciplines including hydrology, landscape ecology, fisheries biology, plant ecology, wetland restoration and ecology and conservation biology. The final report from the Panel is due to CALFED on October 31, 1997.

This final report from the Panel will be the primary topic of discussion at the November 17, 1997 meeting of the BDAC Ecosystem Restoration Work Group. Comments from the Work Group on the Panel recommendations will be summarized in a separate report which will outline public input regarding the recommendations. This public comment report and the final recommendations from the panel will be provided to BDAC at the December 12 meeting. BDAC will also have an opportunity to comment on the Panel report and these comments will be included with the public comment report. The Panel recommendations and the public comments on the panel report will be forwarded to the CALFED Policy Group.

A preliminary set of key recommendations (presented verbally on the final day of the panel deliberations) is attached.

Action Item

This item is included for information only.

Attachment

CALFED Agencies

California	The Resources Agency Department of Fish and Game Department of Water Resources	Federal	Environmental Protection Agency Department of the Interior Fish and Wildlife Service Bureau of Reclamation U.S. Army Corps of Engineers	Department of Agriculture Natural Resources Conservation Service Department of Commerce National Marine Fisheries Service
	California Environmental Protection Agency State Water Resources Control Board			

ERPP Facilitated Scientific Review Key Points and Recommendations

(Preliminary draft prepared by CONCUR 10/8/97; Revised 10/9 by panel prior to presentation, and presented 10/9 by CONCUR.; subject to additional review by the panel prior to inclusion in the panel's final review and adoption.)

From October 6-9, the CALFED Program convened a facilitated scientific review of the ERPP. The agenda for the three and one-half day meeting was structured according to twelve broad questions. The panel deliberated on all twelve questions and at the end of each item the facilitator and panel chair summed up the results. In addition, the panel continued its deliberations in caucus and developed an additional series of findings and recommendations. The following are the key themes presented on October 10th by panel facilitator Scott McCreary. They are still subject to review and final adoption by the panel prior to inclusion in the final report. The final report will also include:

- a synthesis of panel responses to each of the twelve questions; and
- a set of 30 or so additional findings, based on the panel's reflections across the twelve questions.

The final report will be submitted to the CALFED Bay-Delta Program on October 31st, 1997.

This document is a planning document that reviews some scientific information. Therefore, ours was a review of a planning document by scientists.

Findings and Recommendations

A) In revising the ERPP, CALFED should state the case and properly name it. One option is the restoration path -- to revert as far as possible to historic conditions. This path is likely to have a big impact on threatened and endangered species recovery. Another option is to rehabilitate the ecosystem. This could involve improving habitat for exotic species. The enhancement of exotic fish species constitutes rehabilitation and not restoration. This decision to restore or rehabilitate need not be made on a systemwide level -- it could be made on the basis of watersheds and ecological zones. One example of this choice would be to restore the marsh as opposed to creating rice fields for waterfowl habitat. Our figure illustrates these two paths.

This confusion between "rehabilitation" and "restoration" is one among many concerns the panel had regarding the use of phrases and terms in the document. In its summary report, the panel will make recommendations for revisions to the document's nomenclature.

B) Simplify and focus the presentation of the program and its goals predicated on strong conceptual models. The goals should be explicit, quantifiable, and attainable. The panel concurs with CALFED's tiering approach. The use of strong conceptual models will be essential to determine the allocation of effort to each tier. What is still needed is a strong coherent defense of the tiering decision.

C) From the outset, the Program should embed outside scientific expertise in adaptive management. The appropriate role of independent science in the further development and implementation of the ERPP is continuous involvement. This involvement should include: reviewing the rationale, methods, results, and analyses; developing and reviewing recommendations and funding proposals; and pointing new directions. The summary report will provide additional guidance on how to accomplish this involvement.

D) Since the document is predicated on a scientifically-based adaptive management system, there is a need for the continuous development and use models of physical and biotic ecosystem processes and links to biota. There are several kinds of models. Some are large scale and conceptual and concerned with expressing ecosystem operation. An example of such a model is found in the Forest Service's Northwest Forest Plan. A second type is a more focussed model that addresses specific aspects of ecosystem operation. It presents an hypothesis that can be tested and measured. A third type of model is a simulation model which can be useful for making predictions. As an example of the second type of model, the panel developed a qualitative input-output model which can be quantified as data are obtained. (Joy presented diagram).

E) The monitoring component of the adaptive management framework must be developed from a series of testable hypotheses. Information from monitoring guides actions. Here is how such a process would work: the program would propose a management action that would improve the ecosystem. It would formulate hypotheses that describe the outcomes of management action, conduct the action as an experiment, and monitor to test the hypotheses. The panel acknowledges that not all management actions can be structured as experiments, but recommends that this method be applied wherever practicable.

F) The recommendations the panel has made above will require continual interaction of agency managers, agency scientists, and independent scientists. Part of this interaction should entail the creation of a standing science body composed of agency scientists, stakeholder scientists, and scientists independent of the program. The body will facilitate the introduction of science into long term management. The panel notes that other efforts of this kind have failed as a result of failure to include independent scientific review. Some of the activities of the standing science body will include generating and reviewing hypotheses, formulating monitoring schemes, and reviewing and interpreting data. Another function of this body could be to resolve technical conflicts over data, analyses, interpretations and conclusions. Establishing this body will require another round of review and discussions between this panel and CALFED staff.
